Please add the following new claim:

T10

56. (new) A method of forming a continuous film layer of a thermoplastic composition onto a substrate, said method comprising the steps of:

a) providing a molten thermoplastic composition;

b) advancing a substrate along a path;

c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature wherein the thermoplastic composition has a complex viscosity of less than about 500 poise at about 1000 radians/second at the coating temperature and a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;

d) suspending said film between said coating device and said substrate; and

e) contacting said film with said advancing substrate wherein said substrate is selected from the group consisting of textile material, paper, hook and loop fastening web, polyethylene material, non-woven and combinations thereof.

REMARKS

Applicants thank the examiner for the courtesy extended to their representative at the interview of May 14, 2001

Please cancel all prior submissions of February 13, February 14 and March 9, 2001.

1. Present State of the Claims

Due to computer problem, the response submitted on February 13, 2001 contained claims that were already granted. The submission of February 14 was made in an attempt to correct this problem, but due to clerical error, a wrong version was faxed and the problem was not fixed. Despite these errors, it was clear in the text of the remarks of both these submissions that claims 2-12, 33-36, 38-42, 44, and 46-56 only were pending, and that claims 33-34, 36, 38-41 were not amended.

The submission of March 9 corrected all of these errors.

In this response, Applicants resubmit the submission of March 9. Claim 1 is canceled without prejudice. Applicants reserve the right to pursue the canceled claim at a later date.

Claim 10 has been re-written in independent form. No amendment is made. Claims 2-12, 42, 47, and 52-54 have been amended to depend from Claim10.

Claim 49 has been amended to correct the clerical error in the dependency.

Claim 55 has been amended to provide better antecedent. Support for the amendment can be found on p.4, lines 5-9; p. 6, lines 2-6; p. 7, lines 10-25; and p. 6, lines 16-28. The coating weight in step d) has been deleted

Claim 56 has been added. Support for this can be found on p. 4, line 28; p. 5, line 10; and p. 8, lines 1-4.

No new matter is added.

Claims 2-12, 33-36, 38-42, 44, and 46-56 are pending in the application. Examination and reconsideration of the application is respectfully requested.

2. Election/Restrictions

Applicants submit that the discussion above has resolved this point. As now amended, Claims 33, 34, 36, 38-41, existing prior to the response of February 13, 2001 are pending in this application. None of the submission of February 13, 14 and March 9, 2001 contained amendments to these claims. A complete set of claims, marked up to show their status prior to February 13, 2001, is submitted with this response.

Claims 2-12, 33-36, 38-42, 44, and 46-56 were and are now pending in the application. Applicants respectfully request reconsideration.

3. Response to arguments

The response of March 9 is resubmitted here.

I. Claims 1-6, 8-12, 33-42, 44, 46, 49-50, 52 and 55 are rejected under 35 U.S.C. §103(a) as being unpatentable over Cardinal et al. in view of Morman et al. optionally further taken with Bunnelle et al.

Applicants respectfully traverse the rejection.

i) For clarification, HTR-8206 was mentioned in the article by Cardinal et al.

See p. II-4 at the end of the first complete paragraph. Applicants' invention is related to a method of forming a continuous film layer as a coating on a substrate. There is a limit to how high the coating temperature can reach before any serious damage is done to the substrate. Applicants choose the temperature for the comparative studies to be 240 °C, even though the extrusion temperature of the coating can be higher.

Applicants have now also tested Hytrel 4056 in the same manner as HTR-8206 and the results are submitted in a 132 declaration attached to this response. As shown, Hytrel 4056's viscosity, measured at 240°C, at 1 radian per second is more than 1000 poise. Thus, the viscosity is also outside the range recited in Claims 10, 33, 44, 46 and 55. See attached 132 declaration by Robert Polance. The viscosity of Hytrel 4056 was further measured at 310° C, and a viscosity of around 500 poise was obtained, which value is similar to what was disclosed by Morman's Hytrel 4056 that had a water inclusion of 0.2%. All of these measurements demonstrate that the materials recited in Cardinal et al. do not have the same properties as recited in the present invention at the coating temperature.

ii). Morman et al. discloses melt blowing elastic fibers of a polyetherester polymer to form an elastic non-woven web. See Col. 5, lines 24-33. The fibers are extruded from an extruder having a plurality of orifices as molten strands. See Col. 9, lines 10-36. These fibers combined together to form a web, with gaps and holes, and not a continuous film.

In contrast, Claims 10, 33, 44, 46 and 55 of the present invention are directed to methods of forming continuous film layers, using thermoplastic polymers having specified complex viscosity ranges at the coating temperature. The present invention is not obvious from the combined teachings of Cardinal et al. and Morman et al. For the following reasons:

First, Cardinal et al. discloses Hytrel materials that are not suitable for the present invention, as discussed above. Then, Morman found that these same unsuitable materials form non-woven webs, not continuous films.

Second, viscosity values are sensitive to the conditions under which the measurements are carried out. The viscosity values cited by Morman et al. were measured at a temperature of 315°C. See Examples 1-22. This temperature, while

suitable for melt blowing fibers, is not a suitable temperature for coating a film layer onto a substrate. When extruding to form a fiber web, the temperature at extrusion can be done at as high a temperature as the extruding polymer material itself can withstand, without regard to the substrate. This is not so for coating a substrate, when coating temperatures are often lowered so as not to damage the substrate. Thus, at the coating temperature, the viscosity values reported by Morman et al. are outside of the ranges of the present invention.

Third, at the extrusion temperature of Morman et al., care has to be taken to prevent the material from changing color, as noted in the declaration by Dr. Polance.

Fourth, there is no teaching or motivation to combine Cardinal et al. with Morman et al. Even if there was, Cardinal et al. discloses Hytrel materials that are not suitable for the present invention, since the viscosity values are outside the ranges of the present invention, and Morman found that these unsuitable materials can be made into a web by extruding it at a high temperature. The combined teachings do not arrive at the present invention.

Based on the above, Applicants respectfully requested that the rejection should be withdrawn.

iii). With regard to Bunnelle et al., Examiner states that Figure 2 depicts a hot melt adhesive composition being extruded onto a non-woven web material and that the slot nozzle was spaced from the non-woven. As discussed in the previous response, col. 13, lines 66-69, of Bunnelle et al. state that, "The band 13 comes into contact with chill rolls 15 and 16 almost immediately after the extrusion step, so that the band will be cooled . . .".

The present invention teaches dispensing a continuous film layer of thermoplastic polymers having specified complex viscosity ranges at the coating temperature, from a coating device, with the coating device spaced apart from the path of the substrate. The present invention is not obvious from the combined teachings of Cardinal et al. and Bunnelle et al. for the following reasons:

First, the continuous film layer of the present invention is not cooled by chill rolls prior to contacting the substrate, as taught in Bunnelle et al. The coating device is spaced a little apart from the substrate so that there is no immediate contact. Also, the distance

between the coating device and the path of the substrate is not large enough to accommodate such chill rolls.

Second, there is no teaching or motivation to combine the process of Bunnelle et al. with the polymers of Cardinal et al. to arrive at the present invention. Even if, assuming arguendo, that the references could be combined, further cooling the polymers of Cardinal et al. that were already outside the viscosity ranges of the present invention at 240° C would not arrive at the present invention.

Based on the above, Applicants respectfully request that this rejection should be withdrawn.

In summary, Claims 10, 33, 44, 46 and 55 of the present invention are novel and unobvious. Applicants respectfully requested that the rejection based on 35 U.S.C. §103(a) as being unpatentable over Cardinal et al., in view of Morman et al., optionally further taken with Bunnelle et al. should be withdrawn.

II. Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over references set forth in I and further taken with EP 295,694.

Applicants respectfully traverse the rejection.

EP 295 694 relates to a waterproof water-vapor permeable laminated structure and application of the same. A melted thermoplastic resin is drawn from an extrusion port of a T-die at a melt viscosity of about 5 X 10^3 Pa.s or more. (See p. 2, lines 48-54).

In contrast, Claim 7 is dependent from Claim 10, and teaches dispensing a continuous film layer of thermoplastic polymer having specified complex viscosity ranges at the coating temperature from a coating device, with the coating device spaced from the path of the substrate. Further, in Claim 7 the path of the substrate is in a substantially vertical position after passing the coating device. The present invention is not thus obvious based on the combine teachings of references set out in I and EP 295,694 reference for the following reasons:

First, EP 295,694 teaches that if the viscosity of the thermoplastic resin immediately after it is extruded is lower than the range of 10^3 to 10^4 Pa.s, a stable film cannot be formed, and hence a laminated film having uniform resin thickness cannot be obtained. See p. 3, lines 5-9.

Second, EP 295,694 further teaches on p.3, lines 26-29, that "when a thermoplastic resin having a melt viscosity of about 1 X 10^4 Pa.s (100,000 poise) or less was used, pin holes were increased as the viscosity is reduced".

Third, at a viscosity of about 1 X 10^4 Pa.s, some holes were locally found even at a thickness of 50μm (~ 47g/m^2). See p. 3, lines 28-30.

Thus, EP 295,694 completely teaches away from the invention of Claim 7. Also, there is no teaching or motivation to combine this reference with any other references cited in I above. Even if, assuming arguendo, that there was motivation to combine, combining it with either Cardinal et al., Morman et al., or Bunnelle et al. would not arrive at the present invention. Therefore, Claim 7 of the present invention is novel and unobvious, and the rejection under 35 U.S.C. §103(a) as being unpatentable over references set forth in I and further taken with EP 295,694 should be withdrawn.

III. Claims 47-51, 53 and 54 are rejected under 35 U.S.C. §103(a) as being unpatentable over references set forth in I and further taken with Applicant's admitted prior art (and/or the state of the prior art at the time of the invention).

Applicants respectfully traverse the rejection.

These claims are dependent from independent Claims 10 and 33, and thus the comments presented above in I with regard to Claims 10 and 33 are applicable here. There is no teaching or motivation to combine the disclosed art with Cardinal et al., Morman et al., and/or Bunnelle et al. as stated above. Even if there was, the combined teachings still would not arrive at the present invention. Thus, Claims 47-51, 53 and 54 are novel and unobvious. Applicants respectfully requested that the rejection under 35 U.S.C. §103(a) should be withdrawn.

IV. In summary, Applicants have traversed the rejections under 35 U.S.C. §103(a).

4. Rejection under 35 U.S.C. §103(a)

I. Claims 2-6, 8-12, 35, 42, 44, 46, 49-56 are rejected under 35 U.S.C. §103(a) as being unpatentable over Malestsky et al. '928 in view of Cardinal et al.

Applicants respectfully traverse the rejection.

Applicants' argument presented below applies to Claims 2-12, 33-36, 38-42, 44, and 46-56 as discussed before.

The present invention relates to a method of forming a continuous film layer of a thermoplastic composition on a substrate. This is patentable over Malestsky et al. in view of Cardinal et al.

Malestsky et al. disclose an adhesive blend "containing between about 40 and about 95 wt. % of a homopolymer or copolymer of amorphous polypropylene; between about 0 and about 50 wt. % of a homopolymer or copolymer of crystalline polypropylene specifically 5 to 50 wt. %; and between about 5 and about 40 wt. % of a resinous mixture of C_4 to C_{10} hydrocarbons derived from the polymerization and hydrogenation of a petroleum feedstock".... See col.1, line 55 to col. 2 line 2. Malestsky et al. further disclose that a discontinuous coating results when such coatings are made of "polyethylene, ethylene/vinyl acetate copolymers, block copolymers of styrene and butadiene, styrene and isoprene, etc." See col. 5 lines 29-32. Also, Malestsky et al. specifically disclose that the coating has the "ability to interlock in voids between fibers". See col. 3, lines 56-58.

Cardinal et al. disclose breathable films made with co-extrusion coating. See II-3. Cardinal et al. also mention two existing commercial coating methods, i.e. dot coating and flat die coating followed by down gauging. See II-3, and Figs 2-3. For free films, "produced by blown film process or by the cast film process", "films are subsequently laminated to non-woven using a dot coated adhesive as represented in Fig. 2." For extrusion through a flat die, the film is allowed to free fall and pressed onto the non-woven between the nip roller and the chill roller. See Fig. 3.

To establish obviousness based upon a proposed combination of references there must be some teaching, suggestion or motivation in the prior art for making the proposed combination. See Fromson v. Anitec Printing Plates, Inc., 132 F.3d 1437 (Fed. Cir. 1997); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, (Fed. Cir. 1998). Here there is no such teaching, suggestion or motivation to combine the teachings of Malestsky et al. with that of Cardinal et al. Malestsky et al. disclose an unknown coating method that is suitable for making a continuous film out of a specific composition. It is undisputed that Malestsky et al. fail to teach or suggest a method that includes dispensing

a continuous film of thermoplastic composition from a coating device and suspending the film between the coating device and the substrate. In fact, Malestsky et al. do not provide any details as to the mechanics of their coating process other than the statement that the composition is coated "directly on" the substrate. Moreover, there is nothing in Malestsky et al. that teaches or suggests that their composition could be suspended as a film between a coating device and a substrate.

Malestsky et al. not only fail to disclose that the extruder is spaced from the substrate, as admitted in the office action, there is also nothing in Malestsky et al. to even indicate what extrusion method is used. When Malestsky et al. note that "many benefits are realized in the coating procedure using the present composition", they again do not elaborate on their coating procedure. See Col. 5, lines 47-48. There is just no teaching, implied or otherwise, of a coating method where 'a continuous film is suspended between a coating device and a substrate'. This is especially true in view of the admission by Malestsky et al. that "a discontinuous coating' results 'from such coatings of polyethylene, ethylene/vinyl acetate copolymers, block copolymers of styrene and butadiene styrene and isoprene", etc. See Col. 5, lines 32-35.

Cardinal et al. teach compositions having viscosities outside of the disclosure of Malestsky et al. As discussed above, these viscosities of Cardinal et al. are outside of the range of the present invention. Thus, Cardinal et al.'s disclosed methods also teach away from the present invention.

Cardinal et al. do not cure the deficiencies of Malestsky et al. As noted above, Cardinal et al.'s disclosed methods teach away from that from Malestsky et al. Applicants fail to see how a reference that teaches away from Malestsky et al. can cure its deficiency even if there was motivation to combine, which there is none and which Applicants in no way concede. There is no basis for suggesting that the techniques of Cardinal et al. would have been included in the unknown processing methods suggested by Malestsky et al. Besides, Cardinal et al. teach away from whatever unknown method of Malestsky et al., and both references, even if combinable, which Applicants again in no way concede, do not teach the present invention.

In addition, Malestsky et al. do not teach the coating of a continuous film upon the surface of a non-woven web, as suggested in the application. To the contrary, Malestsky

et al. specifically teach that the coating layer has the "ability to interlock in voids between fibers". See Col. 3, lines 56-58. Thus, the correspondence between thickness and g/m^2 will not hold for the coatings of Malestsky et al.

In addition, Malestsky et al. do not disclose what kind of viscosity measurements are involved, except that it is measured at a particular temperature. As there are different types of viscosities, one cannot infer from the teaching in Malestsky et al. that the viscosity is measured at the frequency of the present invention.

Likewise, since Malestsky et al. specifically disclose that a discontinuous coating results when such coatings are made of "polyethylene, ethylene/vinyl acetate copolymers, block copolymers of styrene and butadiene, styrene and isoprene, etc.", Malestsky et al. teach away from Claim 49. See col. 5 lines 29-32.

Further, Applicants respectfully submit that Fig. 3 of Cardinal et al. depicts a curtain coating method, allowing the film to free fall, to be pressed on the non-woven between the nip roll and the chill roll, as discussed above. See p. II-3, bottom of fourth complete paragraph and Fig. 3. This is different from what was suggested in p.4 of the present office action "that in Cardinal after the film contacted the non-woven substrate the same was cooled with a chill roller in order to develop a bond between the film and the substrate."

Finally, since the method of how a continuous layer is made is not taught anywhere in Malestsky et al., even in the examples, Applicants submit that the present invention is, non-obvious over Malestsky et al., in view of Cardinal et al. reconsideration is respectfully requested.

In summary, Applicants respectfully submit that the rejection of Claims 2-12, 33-36, 38-42, 44, and 46-56 under 35 U.S.C. 103 (a) as being unpatentable over Malestsky et al., in view of Cardinal et al. is overcome and should be withdrawn. Reconsideration is respectfully requested.

II. Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over references set forth in I and further taken with EP 295,694.

Applicants respectfully traverse the rejection.

EP 295,684 was cited in the present office action. Since this is a completely unrelated publication, Applicants assume that EP 295 694, cited in the previous action is the correct reference.

EP 295 694 relates to a waterproof water-vapor permeable laminated structure and application of the same. A melted thermoplastic resin is drawn from an extrusion port of a T-die at a melt viscosity of about 5 X 10^3 Pa.s or more. (See p. 2, lines 48-54).

In contrast, Claim 7 is dependent from Claim 10, and teaches dispensing a continuous film layer of thermoplastic polymer having specified complex viscosity ranges at the coating temperature from a coating device, with the coating device spaced from the path of the substrate. Further, in Claim 7 the path of the substrate is in a substantially vertical position after passing the coating device. The present invention is not obvious based on the combine teachings of references set out in I and EP 295,694 reference for the following reasons:

First, EP 295,694 teaches that if the viscosity of the thermoplastic resin immediately after it is extruded is lower than the range of 10^3 to 10^4 Pa.s, a stable film cannot be formed, and hence a laminated film having uniform resin thickness cannot be obtained. See p. 3, lines 5-9.

Second, EP 295,694 further teaches on p.3, lines 26-29, that "when a thermoplastic resin having a melt viscosity of about 1 X 10^4 Pa.s (100,000 poise) or less was used, pin holes were increased as the viscosity is reduced".

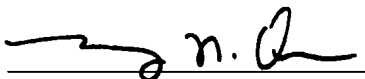
Third, at a viscosity of about 1 X 10^4 Pa.s, some holes were locally found even at a thickness of 50μm (~ 47g/m^2). See p. 3, lines 28-30.

Thus, EP 295,694 completely teaches away from the present invention of forming a continuous film layer with a thermoplastic polymer having the specified viscosity ranges. Also, there is no teaching or motivation to combine this reference with any other references cited in I above. Even if, assuming arguendo, that there was motivation to combine, which Applicants in no way concede, combining it with either Cardinal et al., or Malestsky et al. would not arrive at the present invention. Therefore, Claim 7 of the present invention is novel and unobvious, and the rejection under 35 U.S.C. §103(a) as being unpatentable over references set forth in I and further taken with EP 295,694 should be withdrawn.

5. Conclusion

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the rejection is respectfully requested and allowance and passage to issue of Claims 2-12, 33-36, 38-42, 44, and 46-56 at an early date is solicited.

Respectfully submitted,



7/13/01

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1.(Cancelled) [A method of forming a continuous film layer of a thermoplastic composition onto a substrate, said method comprising the steps of:

a) providing a molten thermoplastic composition flowable;

b) advancing a substrate along a path;

c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature wherein the thermoplastic composition has a complex viscosity of less than about 500 poise at about 1000 radians/second at the coating temperature and a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;

d) suspending said film between said coating device and said substrate and;

e) contacting said film with said advancing substrate.]

10. (amended)[The method according to claim 1,]A method of forming a continuous film layer of a thermoplastic composition onto a substrate, said method comprising the steps of:

a) providing a molten thermoplastic composition;

b) advancing a substrate along a path;

c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature wherein the thermoplastic composition has a complex viscosity of less than about 500 poise at about 1000 radians/seconds at the coating temperature and a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;

d) suspending said film between said coating device and said substrate; and

e) contacting said film with said advancing substrate wherein the thermoplastic composition is released from the coating device at a temperature of less than about 160° C.

2. (amended) The method according to claim 10, wherein said substrate is selected from a group consisting of textile material, heat sensitive material, paper, hook and loop fastening web, polyethylene materials and non-woven.
3. (amended) The method according to claim 10, wherein the coating device is spaced from the path of the substrate at a distance between about 0.5 to about 20 mm.
5. (amended) The method according to claim 10, wherein the coating device is a slot nozzle.
7. (amended) The method according to claim 10, wherein the substrate is directed substantially vertically immediately after passing the coating device.
8. (amended) The method according to claim 10, wherein the thermoplastic composition is dispensed onto the substrate such that the coating weight is less than about 30 g/m2.
9. (amended) The method according to claim 10, wherein the thermoplastic composition is coated at a rate of at least about 200 meters/min.
11. (amended) The method according to claim 10, wherein the thermoplastic composition is released from the coating device at a temperature of less than about 125° C.
12. (amended) The method according to claim 10, wherein the thermoplastic composition is released from the coating device at a temperature of less than about 110° C.

42. (amended) The method according to claim 10, wherein said thermoplastic composition is a [the complex viscosity of the] hot melt adhesive [at the coating temperature is less than about 500 poise at about 1,000 radian/second and ranges from about 100 poise to about 1,000 poise at about 1 radian/second].

47. (amended) The method of claim 10 wherein the thermoplastic composition is a polyolefin selected from the group consisting of polyethylene, polypropylene, amorphous polyolefins, and metallocene polyolefins.

49. (amended) The method of claim [49] 10 wherein the thermoplastic polymer is selected from the group consisting of atactic polyalphaolefins, synthetic rubbers, and ethylenic copolymers.

52. (amended) The method of claim 10 wherein the thermoplastic composition is breathable.

53. (amended) The method of claim 10 wherein the thermoplastic composition is water soluble.

54. (amended) The method of claim 10 wherein the thermoplastic composition is biodegradable.

55. (amended) A method of forming a continuous film layer of a hot melt adhesive composition onto a non-woven substrate, said method comprising the steps of:

a) advancing a non-woven substrate made from fibers along a path;

b) dispensing a melted hot melt adhesive composition from a coating device such that it exits the coating device as a continuous film at a coating temperature wherein the hot melt adhesive composition has a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;

c) suspending said continuous film such that said film builds in viscosity and cohesive strength such that [filaments and] any fibers of the substrate [surface] do not penetrate said continuous film; and

d) contacting said film with said advancing substrate [wherein the coat weight of the film is less than 20 g/m^2].

Please add the following new claim:

56. (new) A method of forming a continuous film layer of a thermoplastic composition onto a substrate, said method comprising the steps of:

a) providing a molten thermoplastic composition;

b) advancing a substrate along a path;

c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature wherein the thermoplastic composition has a complex viscosity of less than about 500 poise at about 1000 radians/seconds at the coating temperature and a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;

d) suspending said film between said coating device and said substrate; and

e) contacting said film with said advancing substrate wherein said substrate is selected from the group consisting of textile material, paper, hook and loop fastening web, polyethylene material, non-woven and combinations thereof.

94-36-3-US-D1
Claims Status Prior to February 13, 2001

What is claimed is:

1. (Thrice amended)A method of forming a continuous film layer of [coating] a thermoplastic composition [from a coating device] onto a substrate, said method comprising the steps of:
a) [making]providing [said]a molten thermoplastic composition flowable;
b) advancing [said]a substrate along a path;
c) dispensing a continuous film of said thermoplastic composition[s] from [said] a coating device at a coating temperature wherein [the complex viscosity of] the thermoplastic composition [is] has a complex viscosity of less than about 500 poise at about 1000 radians/second at the coating temperature and a complex viscosity ranging[es] from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;
d) suspending said film [of said composition being dispensed] between said coating device and said substrate [prior to] and;
e) contacting said film with said advancing substrate.

2. (amended)The method according to claim 1, wherein said substrate is [a] selected from the group consisting of textile material, heat sensitive materials, paper, hook and loop fastening webs, polyethylene materials, and nonwoven.

3. The method according to claim 1, wherein the coating device is spaced from the path of the substrate at a distance between about 0.5 to about 20 mm.

4. The method according to claim 3, wherein the distance between the coating device and the substrate is less than about 10 mm.

5. The method according to claim 1, wherein the coating device is a slot nozzle.

6. The method according to claim 5, wherein said slot nozzle has a shim gap of less than 5 mm.

7. The method according to claim 1, wherein the substrate is directed substantially vertically immediately after passing the coating device.

8. The method according to claim 1, wherein the thermoplastic composition is dispensed onto the substrate such that the coating weight is less than about 30 g/m^2.

9. The method according to claim 1, wherein the thermoplastic composition is coated at a rate of at least about 200 meters/min.

10. The method according to claim 1, wherein the thermoplastic composition is released from the coating device at a temperature of less than about 160° C.

11. The method according to claim 1, wherein the thermoplastic composition is released from the coating device at a temperature of less than about 125° C.

12. The method according to claim 1, wherein the thermoplastic composition is released from the coating device at a temperature of less than about 110° C.

13. (cancelled) [The method according to claim 1, wherein the complex viscosity of the thermoplastic composition at the coating temperature is less than about 500 poise at about 1,000 radians/sec and ranges from about 100 to about 1,000 poise at about 1 radian/sec.]

14. (cancelled) [A disposable article comprising at least one permeable substrate layer and at least one fluid impermeable barrier layer substantially adhered to the permeable substrate layer on at least one face, wherein said barrier layer comprises a thermoplastic composition coated as a continuous film at an area weight of less than 30 g/m^2.]

15. (cancelled) [The disposable article of claim 14, wherein the article further comprises at least one absorbent material.]

16. (cancelled) [The disposable article of claim 14, wherein the barrier layer is moisture-vapor permeable.]

17. (cancelled) [The disposable article of claim 14, wherein the outer layer is a textile material.]

18. (cancelled) [The article of claim 14, wherein the barrier layer comprises a thermoplastic composition such that the complex viscosity of the thermoplastic composition at the coating temperature is less than about 500 poise at about 1,000 radians/sec.]

19. (cancelled) [The article of claim 18, wherein the barrier layer comprises at least one polymer selected from the group consisting of block copolymers, water dispersible copolyesters, ethylenic copolymers, polyolefins, metallocene polyolefins, atactic polyolefins and mixtures thereof.]

20. (cancelled) [The article of claim 18, wherein the coating temperature is less than about 160° C.]

21. (cancelled) [The article of claim 14, wherein the barrier layer comprises a thermoplastic composition such that the complex viscosity of the thermoplastic composition at the coating temperature ranges from about 100 to 1,000 poise at about 1 radian/sec.]

22. (cancelled) [The article of claim 21, wherein the barrier layer comprises at least one polymer selected from the group consisting of block copolymers, water

dispersible copolyesters, ethylenic copolymers, polyolefins, metallocene polyolefins, atactic polyolefins and mixtures thereof.]

23. (cancelled) [The article of claim 21, wherein the coating temperature is less than about 160° C.]

24. (cancelled) [The article of claim 14, wherein the thermoplastic composition forming the barrier layer is subsequently bonded to at least one other material.]

25. (cancelled) [The article of claim 14, wherein the thermoplastic composition is bonded to at least one other material inline after coating of the thermoplastic composition.]

26. (cancelled) [The article of claim 14, wherein the barrier layer comprises a hot melt adhesive.]

27. (cancelled) [The article of claim 14, wherein the area weight of the thermoplastic composition is less than about 20 g/m^2.]

28. (cancelled) [The article of claim 14, wherein the area weight of the thermoplastic composition is less than about 10 g/m^2.]

29. (cancelled) [An article comprising a body fluid impermeable barrier wherein the area weight of said barrier layer is less than about 20 g/m^2.]

30. (cancelled) [The article of claim 29, wherein the area weight of said barrier layer is less than about 10 g/m^2.]

31. (cancelled) [A disposable article comprising at least one permeable substrate layer and at least one fluid impermeable barrier layer adhered to the permeable substrate layer on at least one face, wherein said barrier layer is a coating composition dispensed from a coating device as continuous film at a temperature of less than 160° C, and said coating device is spaced from the path of the substrate at a distance between about 0.5 to about 20 mm.]

32. (cancelled) [A thermoplastic coating comprising a thermoplastic composition wherein the complex viscosity at the coating temperature of said composition is less than about 500 poise at about 1,000 radians/sec and ranges from about 100 to about 1,000 poise at 1 radian/sec, wherein said composition can be coated to produce a fluid impermeable barrier at an area weight of less than about 30 g/m^2.]

33. (twice amended) A method of <u>forming a continuous film layer of</u> [coating] a hot melt adhesive onto a substrate, said method comprising the steps of:
a) [making] <u>providing</u> a <u>melted</u> hot melt adhesive composition [flowable];
b) advancing a substrate along a path;

c) dispensing a continuous film of said hot melt adhesive composition from a coating device at a coating temperature wherein the hot melt adhesive composition has a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;
d) suspending said film between said coating device and said substrate; and
e) contacting said film with said advancing substrate wherein said film has area weight of less than 20 g/m^2.

34. The method according to claim 33, wherein said substrate is selected from the group consisting of textile material, heat sensitive materials, paper, hook and loop fastening webs, polyethylene materials, and nonwoven.

35. The method according to claim 33, wherein the coating device is spaced from the path of the substrate at a distance between about 0.5 to about 20 mm.

36. The method according to claim 33, wherein the coating device is a slot nozzle.

37. (cancelled) [The method according to claim 33, wherein the hot melt adhesive is dispensed onto the substrate such that the coating weight is less than about $30g/m^2$.]

38. The method according to claim 33, wherein the hot melt adhesive is coated at a rate of at least about 200 meters/minute.

39. The method according to claim 33, wherein the hot melt adhesive is released from the coating device at a temperature less than about 160 °C.

40. The method according to claim 33, wherein the hot melt adhesive is released from the coating device at a temperature less than about 125 °C.

41. The method according to claim 33, wherein the hot melt adhesive is released from the coating device at a temperature less than about 110 °C.

42. The method according to claim 1, wherein the complex viscosity of the hot melt adhesive at the coating temperature is less than about 500 poise at about 1,000 radian/second and ranges from about 100 poise to about 1,000 poise at about 1 radian/second.

43. (cancelled) [A method of coating a hot melt adhesive onto a substrate, said method comprising the steps of:

a) providing a melted hot melt adhesive composition;
b) advancing a substrate along a path;
c) dispensing a continuous film of said hot melt adhesive composition from a coating device consisting essentially of a slot nozzle;
d) suspending said film between said coating device and said substrate;

e) contacting said film with said advancing substrate.]

44. (amended) A method of forming a continuous film layer of [coating] a hot melt adhesive onto a substrate, said method comprising the steps of:
a) providing a melted hot melt adhesive composition;
b) advancing a substrate along a path;
c) dispensing a continuous film of said hot melt adhesive composition from a coating device at a coating temperature wherein the hot melt adhesive composition has a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;
d) suspending said film between said coating device and said substrate; and
e) contacting said film with said advancing substrate wherein said film consists essentially of a single layer of said hot melt adhesive having a film thickness of less than 75 microns.

45. (cancelled) [A method of coating a thermoplastic composition onto a substrate, said method comprising the steps of:
a) providing a molten thermoplastic composition;
b) advancing a substrate along a path;
c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature of less than about 160 °C and wherein the complex viscosity of the thermoplastic composition at the coating temperature is less than about 500 poise at about 1000 radians/second and ranges from about 100 poise to about 1,000 poise at about 1 radian/second;
d) suspending said film between said coating device and said substrate;
e) contacting said film with said advancing substrate.]

46. (amended) [A method of forming a continuous film layer of [coating] a thermoplastic composition onto a substrate, said method comprising the steps of:
a) providing a molten thermoplastic composition;
b) advancing a substrate along a path;
c) dispensing a continuous film of said thermoplastic composition from a coating device at a coating temperature wherein [the complex viscosity of] the thermoplastic composition [is] has a complex viscosity of less than about 500 poise at about 1000 radians/second at the coating temperature and a complex viscosity ranging [es] from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;
d) suspending said film between said coating device and said substrate; and
e) contacting said film with said advancing substrate wherein the coat weight of the film is less than 20 g/m^2.

47. The method of claim 1 wherein the thermoplastic composition is a polyolefin selected from the group consisting of polyethylene, polypropylene, amorphous polyolefins, and metallocene polyolefins.

48. The method of claim 33 wherein the hot melt adhesive composition comprises up to 40% of a thermoplastic polymer, up to 40% of a plasticizer and up to 70% of a tackifying resin.

49. The method of claim 49 wherein the thermoplastic polymer is selected from the group consisting of atactic polyalphaolefins, synthetic rubbers, and ethylenic copolymers.

50. The method of claim 49 wherein the thermoplastic polymer is a synthetic rubber that is a block copolymer.

51. The method of claim 49 wherein the thermoplastic polymer is an ethylenic copolymer that is selected from the group consisting of ethylene-vinyl acetate, ethylene-methyl-acrylate, and ethylene n-butyl acrylate.

52. The method of claim 1 wherein the thermoplastic composition is breathable.

53. The method of claim 1 wherein the thermoplastic composition is water soluble.

54. The method of claim 1 wherein the thermoplastic composition is biodegradable.

55. A method of forming a continuous film layer of a hot melt adhesive composition onto a substrate, said method comprising the steps of:
    a) advancing a substrate along a path;
    b) dispensing a melted hot melt adhesive composition from a coating device such that it exits the coating device as a continuous film at a coating temperature wherein the hot melt adhesive composition has a complex viscosity ranging from about 100 poise to about 1,000 poise at about 1 radian/second at the coating temperature;
    c) suspending said continuous film such that said film builds in viscosity and cohesive strength such that filaments and fibers of the substrate surface do not penetrate said continuous film; and
    d) contacting said film with said advancing substrate wherein the coat weight of the film is less than 20 g/m^2.